

petitioned, under 37 CFR 1.136(a), to extend the time for filing a response to the outstanding Office Action by the number of months which will avoid abandonment under 37 CFR 1.135. The fee under 37 CFR 1.17 should be charged to our Deposit Account No. 50-2215.

REMARKS

Claims 1 and 11-21 were rejected under 35 U.S.C. § 103 over Winter in combination with Patil. This rejection is respectfully traversed.

Winter relates to cyclic imides which are used as synergist for improving the properties of aqueous pigment preparations. The imides are those compounds of Formula I which is reproduced on page 3 of the Office Action.

The scope of Formula I is immense. Ignoring branching and cyclic analogs and possible substitutions, R¹ presents 40 different entities, and each of R² through R⁵ presents 259 possible entities (10 alkyls, 10 alkoxys, at least 3 halogens, 11 OR⁶ since R⁶ (and R⁷) can be 11 possible moieties), 49 NR⁶R⁷, 11 COOR⁶, 49 CONR⁶R⁷, 49 NR⁶COR⁷, 49 SO₂ NR⁶R⁷, at least 16 SO₂M since M is any cation having a valence of 1-3, NO₂, CN, and CF₃). Since R² through R⁵ can be the same or different, there are 120 possible combinations even before considering the possible identity of the 259 entities. Even under this very simplified calculation, the number of possibilities runs well into the millions. It does not take into consideration that each of the R¹ groups can be substituted by up to 5 entities and each of the 5 entities is selected from 20 possibilities (6 alkyl groups, 6 alkoxy groups, 5 aryl groups, hydroxy, carboxy and sulfo), thereby raising the number of R¹ possibilities to 140 .

When possible branching and cyclic analogs and possible substitutions are taken into consideration, this number extends well into the billions, if not more.

The Office Action states that when there is 1 particular combination where R^2 , R^4 and R^5 in Formula I are hydrogen, R^3 is COOR^6 and R^6 is hydrogen, the imide is "based on" trimellitic acid. Thus, the Office Action is stating that 1 out of more than a billion possibilities is "based on" trimellitic acid. Since there is nothing in Winter which suggests these selections be made, that statement is in reality just an observation that Formula I is sufficiently broad (i.e., generic) as to encompass trimellitic acid imides in addition to billions of other possibilities.

The Office Action observes that when a species is clearly named, a species claim is anticipated, citing *Ex parte A*. This observation is not pertinent to the rejection since the species is not named, as the Office Action specifically acknowledges on page 4. It is also well established that a genus is not a disclosure of every unnamed species. *In re Baird*, 29 USPQ2d 1550 (Fed. Cir. 1994); *Corning Glass Works v. Sumitomo Electric U.S.A., Inc.*, 9 USPQ2d 1962, 1970 (Fed Cir. 1989). In addition, the rejection under consideration is not anticipation.

Note further that when Winter provides guidance about what selections should preferably be made at column 2, lines 37-42, trimellitic based compounds are excluded -- R^3 can only be COOMe and cannot be COOH . Winter thus teaches away from the invention. The Office Action takes issue with this observation saying there is no proviso in Winter. While literally true, the point (i.e., the stated preference leads away from the invention) being made here is being ignored.

Winter teaches the compound of Formula I is the reaction product of a cyclic anhydride with a fatty amine at column 2, lines 44 et seq. The Office Action acknowledges that a reaction product containing polyisobutylene amine (PIB) is not disclosed. Moreover, polyisobutylene amine is not a fatty amine. The Office Action states PIB is “encompassed” by Winter because it “may” include PIB as a branched alkyl chain with up to 30 carbon atoms. Even under the Office Action’s approach, it must be kept in mind that R¹ can also be a straight-chain or cyclic radical containing up to 30 carbons or a 10-30 carbon atom alkenyl, each of which can be substituted by up to 5 substituents and even if a branched alkyl moiety, can be substituted by up to 5 substituents. Winter provides no reason to make all of the required choices simultaneously.

The Office Action asserts that each of the cyclic anhydride and R¹ “ingredients are homologs” and “structural analogs which are *prima facie* obvious”. It is respectfully submitted that this argument is not valid since it based on a series of hindsight selections none of which fairly reflects what would be understood by a person skilled in the art in an attempt to shoehorn Winter into the claims under consideration.

The Federal Circuit reiterated as recently as August 5, 2009:

[The *O’Farrell* decision] observed that most inventions that are obvious are also obvious to try, but found two classes where that rule of thumb did not obtain. First, an invention would not have been obvious to try when the inventor would have had to try all possibilities in a field unreduced by direction of the prior art. When “what would have been ‘obvious to try’ would have been to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave either no indication of which parameters were critical or no direction as to which of many possible choices is likely to be successful” an invention would not have been obvious. *O’Farrell*, 853 F.2d at 903. This is another way to express the *KSR* prong requiring the field of search to be among a “finite number of identified” solutions. 550 U.S. at 421; *see also Procter &*

Gamble, 566 F.3d at 996; *Kubin*, 561 F.3d at 1359. It is also consistent with our interpretation that KSR requires the number of options to be “small or easily traversed. *Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1364 (Fed. Cir. 2008).”

Bayer Schering Pharma AG v. Barr Laboratories Inc., 91 USPQ2d 1569, 1572-73 (Fed. Cir. 2009). It does not constitute obviousness “to vary all parameters or try each of numerous possible choices until one possibly arrived at a successful result, where the prior art gave no indication of which parameters were critical or no direction as to which of the many possible choices is likely to be successful.” *PharmaStem Therapeutics v. ViaCell Inc.*, 83 USPQ2d 1289, 1305 (Fed. Cir. 2007) (quoting from *In re O’Farrell*, 7 USPQ2d 1673 (Fed. Cir. 1988).

Winter presents a disclosure which requires the skilled person to have to try all possibilities in a field either unreduced by direction of the prior art or reduced by excluding tricarboxylic reactants. Here, it would be necessary to try each of the numerous possible choices, and the direction actually suggested in Winter points away from the invention. That means the invention would not have been obvious. *Bayer Schering Pharma AG*, supra; *O’Farrell*, supra.

In the Examination Guidelines For Determining Obviousness Under 35 U.S.C. 103 In View Of The Supreme Court Decision In *KSR International Co. v. Telefax, Inc.*, now incorporated into the MPEP, the Office pointed out that an “obvious to try” approach can establish obviousness but only where there was a finite number of identified, predictable solutions, with a reasonable expectation of success. In the first example describing how this Examination Guidelines standard is applied, there were only fifty-three (53) possible choices. In *Ex parte A*, 17 USPQ2d 1716 (BPAI 1990), the maximum number of possible combinations was 47, *Id.* at 1718. Review of precedent confirms that this is what was

meant by a “finite” number of possibilities. But that pales in contrast to the number involved here, which is far into the billions. That does not meet the requirement for a finite number of identified, predictable solutions, with a reasonable expectation of success. Winter does not provide a finite number of identified, predictable solutions, with a reasonable expectation of success.

The Federal Circuit has also observed that “a disclosure of millions of compounds does not render a claim to three compounds obvious, particularly when that disclosure indicates a preference leading away from the claimed compounds”, *In re Baird*, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994). If 3 out of a million is not obvious, 1 out of a billion is certainly not obvious. Here, the number of combinations “encompassed” by Winter is huge, numbering far in excess of one billion, if not running into trillions or more, and Winter also teaches away from the invention by stating a preference for R³ to be COOMe. There must be some guidance in the reference (or elsewhere) which would lead one skilled in the art to what is “one in a million”. But there is none here.

Further, given the fact that the number of combinations and permutations falling within the scope of the Winter disclosure is immense, it constitutes, at the very best, a shotgun disclosure. The Board of Appeals has observed that “the likelihood of producing a composition such as here claimed from a disclosure such as shown by the ...patent [disclosing a very great number of permutations] would be about the same as the likelihood as discovering the combination of a safe from a mere inspection of the dials thereof.” *Ex parte Garvey*, 41 USPQ 583, 584 (emphasis by the Board), quoted with approval in *In re Luvisi*, 144 USPQ 646 (CCPA 1965). A shotgun disclosure does not guide the skilled person to a specific composition so as to make that composition obvious, *Ex parte Strobel*, 160 USPQ 352 (Bd. App. 1968), *In re Baird*, 29 USPQ at 1552 (3 out of millions of

possibilities compounds is not obvious). The rule that the ability to reconstruct a composition without guidance or a reason to make selections is inadequate under Section 103, *Ex parte Levengood*, 28 USPQ2d 1300 (BPAI 1993), applies with even more force when a shotgun disclosure is involved. The Supreme Court decision in *KSR*, the cases decided since that decision and the revision of the MPEP in light of the case law, have not changed this.

The fact that the claimed compound is a dispersant is unpredictable based on the Winter disclosure. As the title makes clear and the working example show, the Winter material is a synergist for other ingredients in the dispersions, such as dispersants or surfactants. In this connection, see col. 4, lines 10-15 and note the designation of nonionic surfactants as dispersants in the working examples (e.g., col. 5, lines 61-62 and col. 7, lines 3-4). Winter states that the cyclic imides provide enhanced fluidity and flocculation stability of a pigment dispersion without degrading other properties such as dispersibility, a property that the prior art did not provide (col. 1, lines 40-44), not that they act to disperse a pigment.

The Office Action, however, asserts that the Winter material is a “dispersant” because the “imide has the ingredients of the same nature”. In response, it is submitted that whether or not such an assertion is relevant to an anticipation rejection, it is not where myriad selections must be made to realize “ingredients of the same nature”, and the relevant question under Section 103 is whether Winter makes the dispersant property predictable. It clearly does not. The passage which includes column 1, line 5 noted in the Office Action may make reference to dispersions but it does not suggest the Formula I compound is a dispersant. Instead, Winter says it is a synergist for other ingredients present in the dispersions, such as dispersants.

It will be appreciated from the foregoing that the Winter patent has many major deficiencies with respect to the claims being rejected. It provides no *prima facie* basis for contending anything claimed in this application is obvious, and not only does the Patil fail to remedy the deficiencies of Winter, it actually reinforces them.

To the extent that Patil discloses any type of dispersant, it is a polyisobutylene succinimide, as the Examiner has pointed out. Succinic acid, however, is a dicarboxylic acid. The reference therefore reinforces Winter's teaching of using a dicarboxylic derived material whereas the dispersant of the present invention is derived from a tricarboxylic entity. Arguing, as the Office Action does, that Patil is being used a secondary reference to modify the Winter teaching, does not mean that it is permissible to ignore any teaching in Patil which does not support the rejection. Such disclosure is required to be considered, as "It is impermissible within the framework of section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art". *In re Hedges, et al.*, 228 USPQ 685, 687 (Fed. Cir. 1986)(quoting *In re Wesslau*, 147 USPQ 391, 393 (CCPA 1965)). The ignored text in Patil teaches away from a tricarboxylic entity.

Moreover, there is no valid reason to take anything from Patil and include it in Winter. Winter relates to a colorant composition while Patil relates to an ashless dispersant in an oleaginous composition. There is nothing in any portion of the Patil disclosure which teaches, suggests or even hints that any material disclosed therein can act as a dispersant for a colorant, much less that there is any possibility an isolated polyisobutylene moiety extracted from the polyisobutylene succinimide ashless dispersant

might has some value if substituted for a moiety in some ingredient in a colorant dispersion. There is no reason to attempt to modify anything in Winter by Patil.

The reaction product of the present invention has excellent dispersing properties for a colorant used in, for example, printing inks. Nothing in the art teaches or suggests that such a reaction product may have these properties, and the fact that it does, is entirely unpredictable.

The deficiencies discussed above make it unnecessary to address other assertions made in the rejections.

In view of the above remarks, applicant believes the pending application is in condition for allowance.

Dated: October 5, 2009

Respectfully submitted,

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